Reg. No. : | | | | | | | | | | |

Question Paper Code: 31513

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2016

Fifth Semester

Civil Engineering

01UCE503 - RAILWAYS, AIRPORT AND HARBOUR ENGINEERING

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What are the functions of sleepers?
2. List different conventional methods of surveys for track alignment.
3. Write a brief note on automated track maintenance.
4. What are the advantages of electric traction?
5. Define cross wind component and wind coverage.
6. Differentiate between domestic airport and international airport citing examples of Indian airports.
7. What are the design aspects of terminal buildings?
8. What are the marking required for an airport?
9. Define littoral drift.
10. What is break water? What are its types?

PART - B (5 x 16 = 80 Marks)

11. (a) Briefly explain the modern methods of surveys for track alignment. (16)

Or

(b) (i) Explain the widening of gauge on curves with the formula. (8)

(ii) Briefly explain about super elevation and gradients. (8)

12. (a) Illustrate with a neat sketch, turnout, points and crossings and explain their working principles. (16)

Or

(b) Write short notes on

(i) Turnouts (5)

(ii) Track drainage (5)

(iii) Railway station and yards (6)

13. (a) (i) Explain the steps in the determination of proper orientation for runway. (8)

(ii) Give the various geometric standards for different classes of runway and taxiways. (8)

Or

(b) Draw the layout of airport and explain its components clearly. (16)

14. (a) (i) Explain the various runway and taxiway markings. (8)

(ii) Explain in detail about air traffic control. (8)

Or

(b) (i) Write the construction procedure of the wind rose diagram. (8)

(ii) Explain the planning concept of airport buildings. (8)

15. (a) What are the different components of a harbour? Explain them with the layout. (16)

Or

(b) Write short notes on

(i) Spring fenders (5)

(ii) Breakwaters (5)

(iii) Wet dock and Dry dock (6)